

THE OREDIGGER

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THE VOICE OF COLORADO SCHOOL OF MINES, A SUPERIOR EDUCATION IN APPLIED SCIENCE AND ENGINEERING

"Nice Little..." Rears Its Ugly Head

Falsal G. Hashem

Weaver eastside lurked a flasher. It was Tuesday, Feb. 1 when Brittany (not her real name) heard what was obviously not a too well thought out, "nice little

penis." She walked on into Weaver and spoke to her RA who immediately told her to call Mines police. After reporting the exposure, she asked the officer to find her friend, who also was

walking home, to give her a ride.

When asked what she saw, the victim replied "Nothing he should have been proud of."

According to the Mines police report, she was "walking

back to Weaver Towers on Maple Street.

As she approached the 18th Street intersection she saw the suspect cross 18th Street from parking lot B.

The suspect entered the walkway leading from the intersection of 18th and Maple to the east tower just ahead of her.

He walked in front of her until they reached the northeast-facing door at the rear of the east tower."

According to the victim, he pulled his coat over his head, exposed himself, and said, "Nice little penis, huh?"

"He went back into the parking lot," Brittany said. "I didn't want to go out there [to see where he went]."

Brittany said she was scared and thought "I need to do something about this immediately."

"My main worry was for others," she continued. "He is obviously testing. He

may not have done anything this time, but next time he might."

Brittany said she didn't think she was singled out, but rather that she was a random target. "Girls should not be walking alone," she cautioned, "even if they don't think that it's a big deal. A campus self-defense course for women should be offered."

Brittany said Mines police handled her complaint very well. "They were very thorough and walked through the area with me" looking for clues. They were interested in footprints." Every time she has seen a police officer since the flashing, the officer has asked if she was OK.

Mines police believe that the flashing was a crime of opportunity. Chances are that this dysfunctional person is not too dangerous, they say, but they have a good description and are looking for him with the cooperation of the Golden police, who had a similar incident the same day.

Two officers at Mines DPS recently attended an instruction course to become safety and self-defense trainers in the event of an interest from female students.

The crime was reported as an "Indecent exposure—showing genitals." The case status is "active."



Photo by Douglas Baldwin

Society of Women Engineers Hosts Successful International Day

Agata Miodonski

The Society of Women Engineers hosted a Women's International Day at their general meeting on Jan. 26. At this meeting, two women spoke of a woman's place in their cultures.

The first speaker was Mayumi, from Japan. She gave the audience several facts about life in Japan and where the woman fits in.

From their early childhood, Japanese children are taught to work very hard in school, so that they can get the best education possible.

Education is extremely competitive - parents pick prestigious schools for their children at a very young age.

In high school, the Japanese take 14 subjects so they get an "all-around" education, instead of choosing which subjects to take depending on their interests.

For this reason, Mayumi says, when most Japanese children finally get to college, they tend to party more: "by the time you get to college, you stop studying."

Most work in Japan is male

dominated, so when women want to get jobs, they usually have to go abroad. Some women, for example, move to Hong Kong.

Mayumi spoke about the workplace culture in a Japanese society. She says that men work very long hours in Japan - usually from 6 a.m. to 10 p.m. Because of this, many young children don't even recognize their fathers.

This is one of the reasons that mothers don't want to have jobs in Japan - they don't want their children to not know who their parents are.

Mayumi gave an example of a princess in Japan who went to Harvard and then Oxford, and had a great education. She then got married and soon became a mother. Right away, she dropped her career to be a "good mother." This is very typical for Japanese women.

Another striking example of Japanese culture was about dinners. A lot of Japanese women watch cooking programs every day, because "a good wife should make a different meal

every day."

Mayumi says that despite all the setbacks of women in Japanese society, she is still proud of her culture. She says that Japanese products, unlike American ones, are more efficient, because they're smaller and less noisy. Also, she says, Japanese people are very patient because life is so stressful.

The second speaker at International Day was Mildred, from Uganda. Her full name is Kasumba Naluwoza Mildred. She showed the audience different types of clothes from several parts of Uganda.

"Women in Uganda," says Mildred, "have less opportunity." Her father came to the US once to visit, and though it would be good for her to come to the States to get a college education.

Like in Japan, people in Uganda work very hard all their lives to get into college. Agreeing with Mayumi's statement, Mildred said that "college is one big party."

Women are getting a better chance now, in Uganda, to get into college. Mildred's opinion

on the subject, however, was of mixed feelings.

Grades are given by letters A-F, just like in America, but they are then assigned point values - an A is worth 6 points, an F is worth no points. The more points a student has, the better their chances of getting into college.

Because women have only recently been allowed into the education system in Uganda, they are given a "head start" of 1.5 points. Mildred agrees that this is good for women, because it gives them the opportunity to go to college.

However, whenever a woman gets ahead of a man, she is liable to be labeled a "1.5." Mildred says that it is a difficult sacrifice - "to be labeled a 1.5 or to get an education."

In Uganda, women are still inferior to men. "You are a woman" is a phrase that is constantly pounded into the heads of women in Uganda.

Mildred says that she remembers as a young child, she would not be allowed to climb trees or do a lot of other things that her

brothers and other boys could do, because "I am a woman."

One of the audience members asked Mildred if the woman's inferior position in her society bothers her. "That's the culture; that's what identifies us," said Mildred. It bothers her that women are inferior, but that is the culture, and many people are reluctant to change it.

Marriage was one of the topics that Mildred talked about. She said that a woman is bought when she is married, and therefore divorces are strictly forbidden. When she is married, a woman gets her head shaved. This, to Mildred, is "a sign of slavery."

Despite all the setbacks, "things are changing" for the better in Uganda. In fact, Uganda now has a woman Vice President. "However," adds Mildred, "women are [still] constantly reminded you're a woman, you can't talk." The Vice President is simply a puppet in the government.

SWE's second annual International Day was a big success, and will be seen for years to come.

Students Show Great Interest in Art Class

Erin Kock

"I think that this class is very beneficial," said Cristina Mio, a CSM staff member and student of the Studio Art class, which is being offered for the first time this semester.

"It teaches us to look at things in a different way: things are not only entities to be measured and studied scientifically, but are also 'blobs' of colors with shadows and reflections. And rendering these three-dimensional forms with paint and brushes is not as easy as measuring them with scientific instrumentation"

Students last fall had an opportunity to sign up for the first painting class offered at the Colorado School of Mines and the response was greater than Dr. Robert MacPherson, who teaches this experimental class on Friday evenings, expected.

"Unfortunately the class is too large. This was an accident and I think the size of future classes will be limited to allow a little more personal attention," said Richard Porter.

The students in the class include undergraduates, undergraduates, staff and faculty from CSM.

Many students are enthusiastic about what they can learn from the class about painting as well as in other aspects of life.

"Learning art can help a student be more well rounded. Also, to try to paint gives one a greater appreciation for art in general. I think that art classes that employ a person's spatial perceptions (i.e., painting, sculpture, etc...) can help in honing those perceptions for use in modeling or visualizing 'real world' prob-

lems (like engineering or physics problems)," said graduate student Jed Ley.

"I think that the class is ex-

tensive," added Michelle Ausmus.

Many students in the class are hopeful that similar classes will be offered in the future.

"I think the class is definitely beneficial—it gives the average engineering student a taste of what else is out there. I also think that many of the students at CSM really want opportunities like this. The class is packed! There should be more art classes offered because I definitely see the demand. There are many more students in this class than in the average LAIS class at Mines," commented undergraduate Stacey McEwen.

Although students enjoy the class, some feel offering too many art courses could detract from the engineering education received at Mines.

"Of course, it's a change of pace for faculty and students. I don't know if there should be more art classes offered since this is a specialized school in engineering and that's maybe where the board wants to focus their attention," said Craig Sabol.

Dr. MacPherson said, "I don't really know about the need for more art classes. I suppose that's a function of time, interest and money. The School also needs to be thoughtful about how art classes fit with our mission. The plain fact is we can't do everything and it's a bad mistake to try. There are also lots of places nearby that specialize in teaching all sorts of art, so we have to be careful about simply duplicating what is already available."

Staff member Gayle Elliot echoes the thoughts of many students of class "I have a long way to go!"

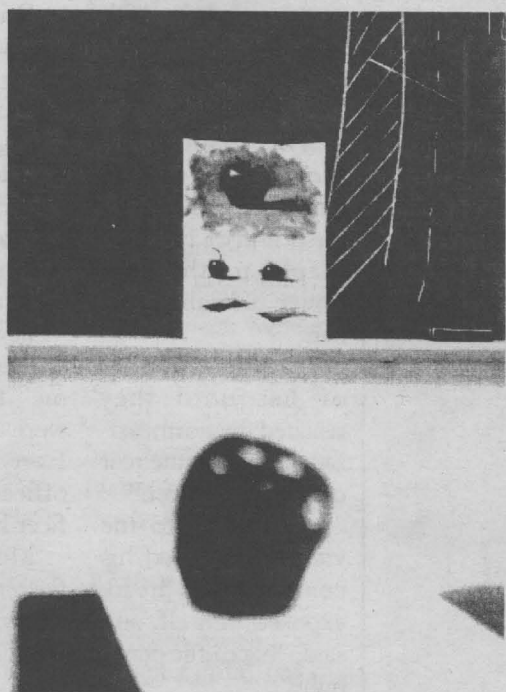


Photo by John West

remely beneficial but not in a conventional way," said Christy Bullard.

"I can't take what I've learned as a painter and apply it to what I will be doing for the rest of my life, but I do get emotional satisfaction from it."

"To me, painting is as important as breathing... Painting has enhanced my life in many ways. My wife introduced me to Buddhism several years ago and I find that painting helps me to better understand and practice some elements of Buddhist thought," said Dr. MacPherson.

Besides the opportunity to learn, students feel the class offers an opportunity to unwind after a long week.

"It helps me release my stress after a long week," said Natsumi Matsuda.

"I like the freedom of the class—it is guided but not restric-

Bookstore News

The CSM Bookstore will begin remodeling work in just a couple of weeks. When they start remodeling they will be returning textbooks to the publisher. If you haven't purchased your books you will need to do so soon because the bookstore will not be able to order them for you after they return them.

Boiling Water Wakes Bradford Residents

Agata Miodonski

Early Friday morning, a fire alarm woke residents of Bradford Hall late at night. Sleepy students rushed out of the building wondering what had happened.

At about 1:45 a.m., the fire alarms rang. Although some students were still awake at the time, most had already gone to bed. Several students misinterpreted the fire alarm for their own alarms, but everyone came out in time.

Standing outside in the cold air, students stood in groups asking what had caused the alarms to go off. Eric Stellmon, Hall Director for Bradford, came outside and asked if anyone had been cooking anything.

Someone had been boiling water in the basement kitchen. The latest information suggests that there was food left over on the range from someone who had cooked earlier. This burned food seems to have set off the fire alarm.

Colorado Mountain Club

Wonders Of The Open Road

The Colorado Mountain Club presents Wonders of the Open Road: A Coast-To-Coast Bicycle Trip Across Asia, Thursday, Feb. 10, 7:30 p.m., at 710 10th Street, Suite 200, Golden.

In June 1999, Stan Havlick and two friends dipped their back wheels into the Caspian Sea off the shores of Turkmenistan.

Nearly two months and 4,000 miles later, they dipped their front wheels into the Yellow Sea, southeast of Beijing,

China.

Their ride took this team over the Tian Shan mountains of Kyrgyzstan and across the barren Garagum, Taklimakan and Gobi deserts of Central Asia.

Everyone is welcome to enjoy the tales and slides of this extraordinary adventure and unique cultural experience.

For more information, please call 303-279-3080 or visit <http://www.cmc.org/cmc/index.html>.

Dental Clinic Enjoying Success

Agata Miodonski

Students have overwhelmed the new dental clinic at Mines. Since its introduction last semester, the dental clinic has enjoyed a constant flow of students seeking care for their pearly whites.

The huge success of the clinic has also had some drawbacks. Students wishing to see the dentist, Jeanette Courtad, may have to wait until April! Appointments are being set for two months in advance.

"We are thrilled with student response," says Marian Rohrer, R.N. The biggest drawing factor to the student dental clinic, says Rohrer, are "the extremely low prices."

The clinic is in the back por-

tion of the Coulter Student Health Center. It has two chairs, with room for another addition in the future.

The dentist has seen about 60 students every month since the beginning of last semester.

Because the clinic is "in very high demand," says Rohrer, a hygienist will begin working sometime in February, for about eight hours per month. This will free up some of the dentist's time, since the hygienist will be able to do some cleanings.

The clinic is currently open three mornings every week: Tues., Wed., and Fri. from 8 am to noon.

Because of the need for more time, the dentist has added about

two hours of dental time per week.

The clinic will be open during spring break also, although it is booked that week.

The dental clinic will be open in the summer as well, which may be of interest to students staying in the Golden area during the break. The hours will be announced later in the semester.

"One of the problems we have faced," says Rohrer, "are students who don't show up for their appointments."

If you can't make your appointment, the staff at the Health Center asks that you call at least 24 hours in advance.

Since the clinic is in such high demand, many students are on

a waiting list and would be willing to fill the cancellations.

"No-shows have been a bigger problem than we expected," says Rohrer. Students who don't cancel appointments within 24 hours before the appointment will be charged whether or not they show up.

"It is important to keep or cancel your appointments," emphasizes Rohrer. Another note that Rohrer wishes to make is that students need to show up on time to their appointments.

It is sometimes a little frustrating to know that the dental clinic is booked so far in advance, but everyone seems to be happy that the clinic is enjoying so much success among Mines students.

CARL is Dead

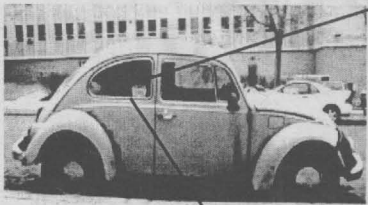
Loic Wagner

That's right, the highly enjoyable CARL system is out. So say a tearful farewell to the hours of confusion and aggravation.

That being done, how would you like to say hello to \$50? Simply go to the library and propose a name for the new system. There is a box on the wall to the right of the circulation desk where entries can be made.

The winner will get a free t-shirt and a \$50 certificate good at the CSM school store.





CAUTION

DO NOT PLAY ON, IN,
OR AROUND
THIS CONTAINER

Someone with a good sense of humor.



NO CRAP ON TAP

FALLING ROCK TAP HOUSE

1919 Blake St. • Denver, CO • (303) 293-8338

BAD COP

NO DONUT



EARTH FIRST

We'll Mine The Other Planets Later

Mines students are always sensitive to public opinion.
(sort of)

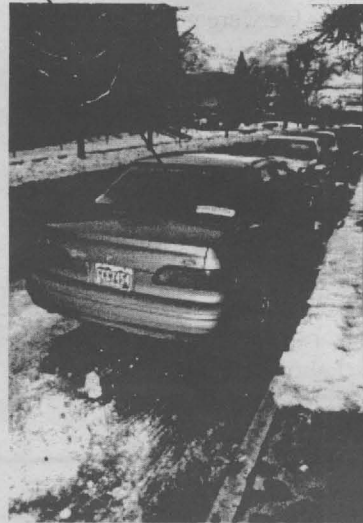
186,000 Miles Per Second
It's Not Just A Good Idea
IT'S THE LAW!



BAN MINING

LET THE BASTARDS FREEZE IN THE DARK

The essential Mines sticker.



Photos by John West

Okay Mines, Here's Your Sign!

The world can say what it wants to about the Colorado School of Mines, but here's what Mines students have to say.

Happy Valentines Day!

Heidi,

You are my fire, the one desire. Please know how special I think you are. You're an amazing friend and have an amazing out look on life. I am a better person for knowing you. Happy Valentines Day. Brooke

Freshman from San Diego living off campus. Loves the beach and volleyball. Looking for nice guy on Valentines Day. E-mail me at hugankiss55@hotmail.com

Hey Oredigger Staff- we can't live without you! Love, Prospector



Sarah,

J'aimerais te remercier pour ton amitie, et te rappeler de manger des chocolats de temps en temps. Ton pote francophone.

Hey Andrew, That night on the beach was great. I'm still finding sand... XOXOXO, Amanda

Hey Harald- you're such a hottie!

Eric, You're sweet, but stop calling! ~CSM frosh girls

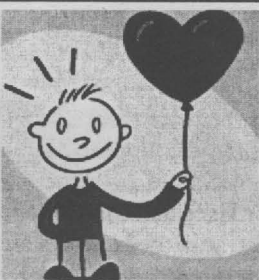
No permanent home
A stony ground to lie upon
I'd be content with you

Sure unfair the deal
For you've much better choices

Joy comes to me for your freedom too
Though I'd be content with you

Happy Valentines Day
Roses and Peaches!

I would like to have a shout out to all the past loves in my life that have broken my heart. Physics II, C++, Quant Lab, and Stat-ics; you can bite me! -lol Scott



Dale, Can I have my handcuffs back?

~Julie

JXM~

If you were to jump off a bridge, I wouldn't jump with you, I'd be at the bottom to catch you.

~GXJ

Happy Valentines day to the girls from the boys, 2nd floor, west side, Weaver's Towers - Terra, you rock!

Dear Guppy, I love you with all of my scaly skin and fishy heart!! Always, Flounder :)

Jesse, Will you be my valentine? I love you! Love, Smartie

Christina, I think you're really sweet. Maybe we can go out sometime.

"Kemo,"

To my very best Internet friend I'll beat at Half Life one day. Happy Valentines Day. Your "Hopfrog,"

Josh West

love you lorda james



Joshua West, I know we haven't talked much but I think you're very sweet. Let's go out sometime. Your admirer in Earth Systems class

Jeremy, Here's hoping you have a very happy Valentines Day. See you later tonight. Your best friend with benefits,

Josh West

Danna- until we find those good- looking, sweet, well-read geniuses, nous sommes les amies meillures!

Tom, You're a nice person and I'd like to get to know you better. Your 9 o'clock admirer

John, I never want to see you again! Love, Jen

Hey Joe- you want to get together on my big brown couch? Your loving couch potato

Melissa, Please say you'll be my valentine. Mark

Dawn - I love you sweetie.

Dear Bunker- I love you. Love, Aunt Mo

Ryan - want to share a ride on RTD?

To my homies on 4th & 5th east side Weaver. Happy V-day. Mike D.



Hey Prospector Staff, We love you too! Oredigger Staff :)

Welcome to Boarder Mecca, eh?

Terra Rogers

After retrieving my board from surgery at a local repair shop in Spokane, we were on our way to Canada. Food was always a priority for Amy and me, so the goal at hand was to eat. Seattle was the set destination for dinner, however Mitsy (our Mitsubishi) began showing symptoms of a broken CV-joint half way across Washington. We crawled into the foggy city of Seattle late and again found a comfortable road shoulder in a residential area to sleep on. The following morning Mitsy went into the shop and Amy and I were set loose on Seattle's bus system still wearing long underwear and snowboard coats. After breakfast downtown, we returned to find a bald spot on a warranted tire. Again, Murphy

was working hard to put his laws to use.

Finally we were on our way to Whistler, the Mecca of our snowboarding pilgrimage. A day late and a few \$100s shorter than planned—though nobody cared—we were going to Whistler. If words could describe the beauty of the drive from Vancouver to Whistler, I would attempt them. The moon was the closest to the Earth it had been in over a century and completely full, lighting a windy road that, in one glance, harbored snowcapped mountains, endless ocean, and city lights. I decided that night that I would need to spend more than just two days in this corner of the world. I am going back!

I would think that the simple name WHISTLER (famed the

world over) would be all that is necessary for one to appreciate the great lengths we endured to get there. Before I begin on my description of the largest ski area on this continent, I should describe the night prior; Whistler's nightlife cannot be overlooked. Amy and I changed out of our long underwear

quickly and into attire more suitable for our needs; British Columbia's drinking age is 19. All the bars were packed and the dance floors were full. Again we felt that sleep was for the weak and received our average three hours for the night.

The next morning's first glance



one stands at only 7,494 feet above sea level on Blackcomb, and 7,160 feet on its sister mountain, Whistler. For those of you that are only familiar with mid-western Rocky Mountain snow, I need to describe to you what you will find on Whistler/Blackcomb's 7,000+ acres. The 30 feet of annual snow is heavy! With the snow

piled on my board that dangled from the lift, it must have weighed twice as much as normal. A pleasant surprise we found on the lifts was the people. Whistler truly is an international destination and we heard accents from all over the world. But Mitsy was the only vehicle wearing a Colorado license plate. We were proud. The mountain village was a city in itself that offered everything one would need or had managed to forget or lose. (Amy bought deodorant.)

Whistler's self-sustaining and eclectic community made it the definition of a winter vacation spot where the hotels pamper you, the nightlife entertains you, and the five-mountain-base ski area blows you away.



Oil: Tech Trends in the Industry

Faisal G. Hashem

"...We favor companies with a significant exposure to information and evaluation technology - the fastest growing subsector in the oil service industry. In no other area are oil companies more reliant on the service group for technical assistance in drilling and development decisions." Taken from Lehman Brothers' "Oil Service: Technology Takes Center Stage," this gold mine of information cites Western Atlas, Inc., Schlumberger Ltd., Petroleum Geo-Services, Baker Hughes, Inc., and Halliburton, as the sources of their future oil industry prognosis. (Quotes in the following are all from Lehman Brothers...)

Few businesses today have the potential impact on the world as oil companies do as they convert their operating functions to the service sector. "Natural byproducts of these trends are new business arrangements between oil companies and service companies called strategic alliances and integrated services." "...Use of [these] alliances and integrated services...will continue for the next several years, eventually reaching a natural plateau at about 25% of total [oil] service revenue." Basically, this means that the difficulties of hunting, for a while, are over. Today, it's a technology game. "...Exploration and develop-

ment is being forced to more challenging locations. Today's international activity is in remote and difficult locations, in deeper and deeper water, and in breakthrough areas like subsalt horizons."

So what exactly are these redemptive technological trends? Because the petroleum industry is a multidisciplinary community, it is difficult to classify recent technological advances. The main qualifiers are seismic, formation evaluation, specialized drilling systems, and coiled tubing.

Seismic: "The remarkable advances that have occurred in seismic technology have had more influence on the growth of international production than any other single factor, with the possible exception of firm oil prices. Seismic's value to producers has increased exponentially after tremendous advances in data acquisition, processing, modeling, and interpretation. The technology's effects extend to exploration and development below layers of sound-distorting salt. The primary driver in the seismic industry's ascent has been the growth in affordable computer power. The advent of massive parallel processing applications in the oilfield has opened up new possibilities to operators, allowing seismic data to be gathered in new ways. Multiple sound sources can now be used with up to 12 signal-receiving streamers in marine operations in any

number of survey patterns." Now real-time processing is the norm. Results are analyzed both at sea and on land in regional processing units. The effect of this exploration in "marine seismic power" has been to greatly increase accuracy in prospect modeling. Operators now drill fewer wildcat wells and are discovering "commercial quantities" of oil. "Wildcat success rates industry wide in the Gulf of Mexico exceeded 40% in 1994...compared to a historical success rate of half that level over the past several decades." This enthusiasm in the subsalt areas of the Gulf of Mexico results mostly from 3D seismic technology. Currently oil companies can "look underneath huge sheets of salt" for deposits invisible to 2D techniques. A new and exciting application, which is called time-lapse 3D seismic, also called 4D seismic, allows operators to see inside a producing well. Watching the progress of oil, water, and gas in a reservoir as it is retrieved holds "the potential to save oil companies from drilling unnecessary wells, or tell them where to drill new wells. Land seismic use, especially 3D, is growing in areas like complexly faulted fields, reefs, and the underground salt domes, which cross the gulf coast region and the West Texas expanse.

Continued on page 10...

PROFESSOR PROFILE:

Dr. Barbara Bath

Danna Luo

Everybody knows Dr. Barbara Bath here at Colorado School of Mines. She has won many teaching awards from the graduating seniors, as well as the Rocky Mountain Mathematical Association of America Award for Excellence in College Teaching, and the Amoco award for teaching during her career here at Mines.

Born and raised in Kansas, she attended the prestigious Wellesley College after graduating from Argentine High School in Kansas City. After two years at Wellesley, she transferred to the University of Kansas, the family Alma Mater, where she obtained her Bachelors and Masters in Mathematics. Soon after, Dr. Bath married and had four children in the next four years. All are doing extremely well.

For 8 years, Dr. Bath served as friend and teacher to a boy with Aplastic Anemia at the National Institutes of Health. For one hour per day, she gave the world to a boy living in "a plastic bubble." Her experiences lead her to write her PhD thesis on "The Effect on the Computational Ability of Children with Acute Lymphocytic Leukemia Due to Prophylactic Treatment

of the Central Nervous System".

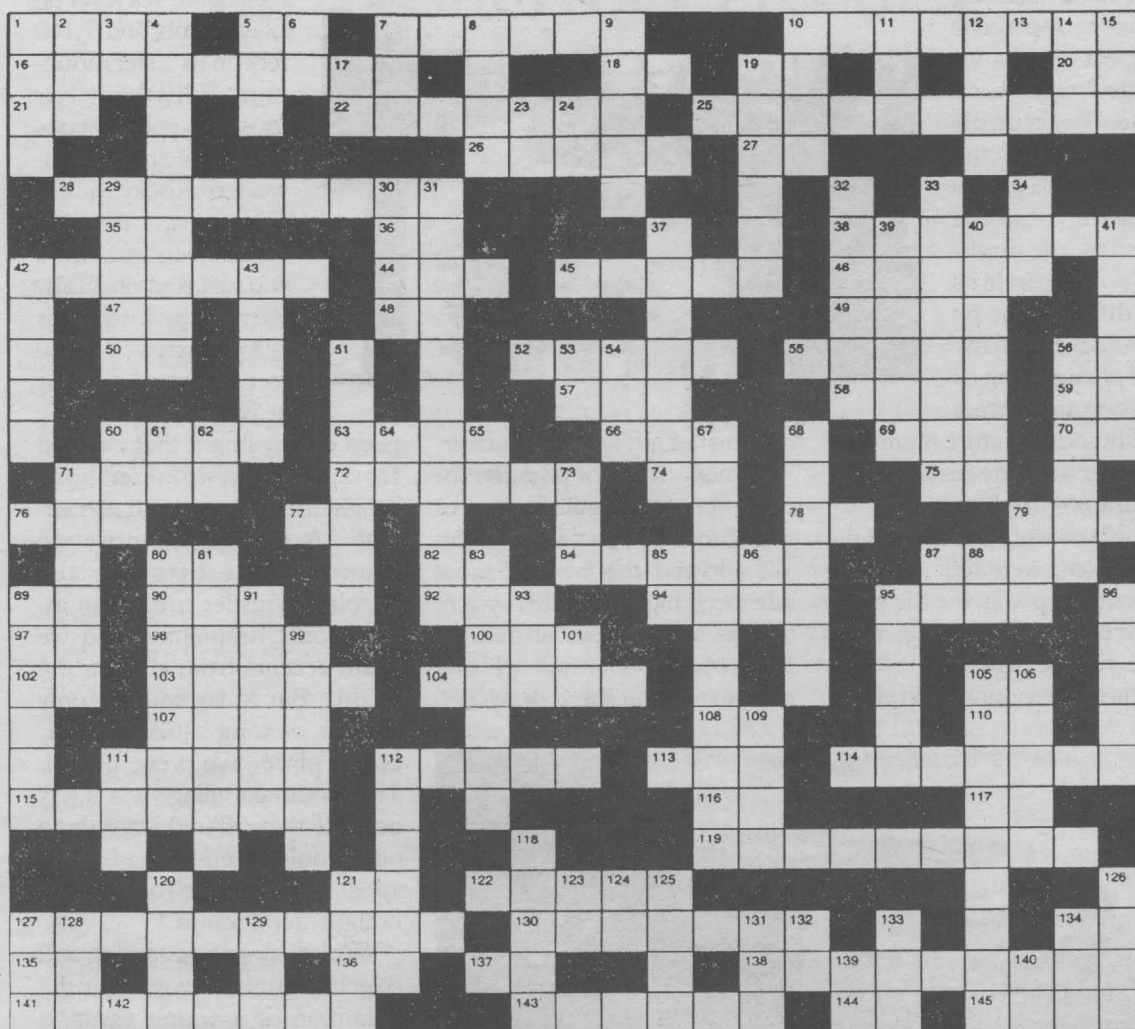
At Mines, Dr. Bath made many achievements in our academic curriculum. In 1987 Dr. Bath, alongside Dr. Barbara Olds, taught a McBride Seminar which is being taught this semester by Dr. Olds and Dr. and Mrs. Cecil. The other Dr. Bath, Dr. Tom Bath, is the Principal Moderator of the McBride Comparative Political and Economic Systems following a distinguished career as a Chemical Engineer.

In 1995, she helped revise the course curriculum in the Mathematics and Computer Science department. In order to help students succeed by introducing problems from the various science and engineering disciplines, the Calculus II course was changed to included multi-variable calculus, putting Mines ahead of other engineering schools.

Dr. Bath is a great asset to CSM. As a freshman on campus this year, I received a lot of good advice from her about my own personal major. Her compassion for teaching and helping students makes her one of the most respected and loved professors at the Colorado School of Mines.

Mines Crossword Challenge

Brett Maughan



ACROSS

1. Worm spun fabric
5. Two letters Oredigger journalists hate
7. One of the boarder girls
10. Bob
16. Bob
18. Initials of Editorials Editor (barefoot and fancy free)
19. "To ___ or not to ___"
20. The Knights Who Say ___
21. ___ la la la la
22. Unsatisfactory answer on Physics exam
25. Dr. Bob (dearly departed)
26. Real reason to attend CSM classes
27. There they are again, dammit! (See 20 across)
28. What the opposite sex is
35. Such as, for example
36. Not you
38. The food services of Satan himself
42. Dr. Bob
44. Not even (most CSM students)
45. Bob
46. CSM has a poor one, depending on your point of view
47. Periodic Table element of #47, common on pimps
48. The land of the little people (not kindergarten)
49. The hydraulic conductivity of your telephone?
50. O? Not yet you aren't!
52. The national game of South Africa. Go Springboks!
55. Famous Dish
56. Initials of Features Editor
57. A quadriplegic in a river
58. If, after two beers, you ___, then you may be a lightweight
59. With respect to
60. Most Physics exam participants are anything but
63. The best you can hope to do here sometimes
66. "Do the ___"
69. Now they're multiplying

exponentially! Run for your life!!

- (See 20 across...yes I know I'm stretching on this one)
70. Initials of the Editor-in-Chief (Da Boss)
71. Back when math was simple
72. Dr. Bob
74. A? Not there yet!
75. Home of Super Bowl XXXIV
76. Subdivision of a play
77. One person you don't want taking a class with you
78. Periodic Table element #79, also common on pimps
79. An adventure every time
80. 3. 14159265358979323 84626433832795028841971693
82. What your date is, to say the least, when you're 2 hours late: ___
84. Who most CSM women wish CSM men were like
87. Beginning of Snowboarding Pilgrimage
89. 21st state, "The Prairie State"
90. Perpetual state of being during E-Days: "___ stupor"
92. Look out prairie dogs, British oppressors, and democrats; Charlton Heston and crew have your number
94. The gay one?
95. Disney's made for CSM movie from the 80's starring Starman
97. Periodic Table element #13, only on the cheap pimps
98. Opposite of a spring tide
100. What made Jed Clampett filthy rich
102. Phrase commonly heard after Physics exam: "(First Word)"
103. "(Second Word of 102 across)"
104. "(Third Word of 102 across)"
105. Written afterthought
107. The key to a magical wonderland filled with happy, smiling people
108. A happy Spaniard: "___!"
110. Something every Physics exam could use

111. A sign it is time to clean the refrigerator

112. Dr. Bob
113. The One in 112 down
114. Less lively than Golden
115. Ex- CSM Football coach
116. KOSI 101 ___, music of choice for the Prospector staff...hah!
119. Cafeteria delicacy
121. Department that 42 across is Head of
122. Bob
127. When I will make another crossword from scratch
130. A pretty cool sounding word, but don't you trust it!
134. I don't know. Are you?
135. Common greeting in the REAL world
136. 84 across and 71 down, five nights a week, only here
137. The superior calculator
138. E-Days deity
141. Father and son teaching team
143. Bob
144. Initials of our omniscient, omnipotent, and omnivorous Faculty Advisor
145. Standard fluid measurement in Cancun

DOWN

1. Initials of outgoing Business Manager and his eager-beaver replacement (distribution)
2. "Yes, ___ Engineer."
3. Aside from the riots, smog, traffic, and earthquakes, a virtual utopia
4. Reason to attend CSM classes
5. Much tastier with the E
6. The outgoing Sports Editor (damn that free-agency crap)
7. Famous 1973 Supreme Court case on abortion: ___ vs. Wade
8. Eastern Pacific island that's actually U.S. territory
9. The Enemy

10. The Search for Extra-Terrestrial Intelligence (if you can't figure this one out, I fear for you)
11. Common misspelling of school for rich kids with laptops
12. What the concrete canoes weren't supposed to do
14. Common phase upon waking the day of a Physics exam
15. Our football team gets one every year
17. Inter-vehicular communication device
19. Dr. ___ Honeydew
29. Flower commonly white, pink, or purple
30. Just one cow sound
31. The greatest rock band in history (no bias here)
32. Bob
33. What 38 across only does good for 51 down and paying alums
34. An Eastern religion rooted in nature
37. What the stressed-out CSM student did to the baby seal
39. Unpleasant sound coming from car, calculator, head, etc...
40. What they'll need to contain E-Days this year
41. Maestro Bob
42. He "stole" Gollum's precious
43. One reason engineers wear hard hats
51. President of CSM
56. Important to remember to do when on the M-Climb
60. Damage with a sharp edge
61. Initials of the News Editor (polish sausage, yum)
62. UNIX list command
64. "Once I find that ___ button, I'm home free."
65. Two letters disliked by many Petroleum Engineers
67. First PROFESSOR PROFILE of the semester
68. Vital commodity for between class caffeine fix
71. Who most CSM men want CSM women to be like
73. Bombadil of Middle Earth lore
79. What you're wishing you'd done before the Physics exam started
80. "He's a ___ Wizard"
81. In the right-most column on the Periodic Table
83. Cafeteria salad delicacy
85. "WELL ___ MR DUCKS!"
86. Popular prime-time drama
87. If your Physics test could talk,

- it would say "___ so wrong! Hah!"
88. A bad word to end a sentence with
91. The kind of grade combo that really pisses you off.
93. What Texans miss most about home
95. Word seldom used to describe cafeteria food
96. New head of Geophysics Department
99. "This large metal ___ ought to be enough to keep the ___ majors away from the VCR."
101. What any beer other than Guinness should be labeled as
105. With arrogance, as with student graduating with 4.0
106. New CSM football coach
109. In some cases, Physics exams have been known to induce a ___
111. Floats like a butterfly, stings like a bee
112. Recent made for CSM movie starring Ted "Theodore" Logan Jr.
114. New sports editor with first initial same as 18 across and this last initial
118. On thing Profs never remember to provide for Physics exams
120. "The source of, and solution to, all of life's problems."
121. From which springs the fountain of eternal wakedness
123. Comment from insensitive grader, "___ Suck!"
124. Department our mysteriously absent Business Manager belongs to
125. What you call 25 Mines students, 100 Golden HS students, and the entire Golden PD, coming soon to an intoxicated campus near you
126. Golden weather demon
127. High school honor society (can you remember back that far?)
128. Proof that all engineers have latent sadomasochistic tendencies
129. Co-ed (naked) service fraternity
131. The faster they deliver the less accurate their aim
132. Don't you get smart with me you little snott!!
133. A la Bill the Cat: "___!"
134. Russian engineering at its finest
139. Abbreviation for room
140. The grades you've forfeited by taking the time to do this puzzle. Thanks.



My usual movie review column will return next issue. And, most likely, the home-made crossword puzzle will NEVER return again. Till then, Happy V-Day.

-- BM

THE
HERITAGE SQUARE

MUSIC HALL

Playing January 21-- March 5, *The Drunkard*, a comedy adaptation of the old melodrama. Prices for dinner/show: \$23.50-\$28.50; show only: \$15.50-\$19.00.

Playing February 6-- April 30, Sunday evenings only, *That's Still Too Loud*, a '50's, '60's, '70's comedy rock & roll hit. Show only \$15.50.

For information and reservations, call (303) 279-7800.

Legendary Jazz Musicians Visit Denver

Tim Newlin

Coming up this month at the Colorado Symphony orchestra is a performance with a different character than the usual classical music lineup. On February 11th and 12th, Billy Taylor and Ramsey Lewis will be featured as guest artists at the symphony, bringing their unique musical style to Denver with Super Pops #6. Both men are accomplished jazz pianists, with a long history of expanding and promoting America's classic music. Lewis, with over 60 albums produced during his 40-year career, was a major player on the pop charts in the 60's. His singles appeared four times, reaching as far as number 5 with "The In Crowd." Others that were hugely popular were his covers of rock and roll songs, including "Hang on Sloopy", "A Hard Day's Night", and "Wade in the Water." Several of his singles, along with two albums, went gold, and he received three Grammys as well.

Ramsey now hosts a syndicated radio show at WNUA Chicago, and hosts the weekly jazz program "Jazz Central" on BET. In addition to being involved in community and youth

jazz programs, he still enjoys performing for the modern audience. "A beautiful melodic line will come...as if I am a conduit. I play a mood and it is yours. I



want to bring that secret to an audience who will recognize in it the deeper secrets of their own hearts."

The other half of the duet is Billy Taylor, who is widely acclaimed for his writings on the musical form of jazz. This is above and beyond his considerable achievements in the music itself, which consists of more than 300 songs. In the past he has played with such jazz legends as Dizzy Gillespie, Ella Fitzgerald, Miles Davis, Charlie Parker, and Billie Holiday. His

latest CD, "Music Keeps Us Young" (Arkadia), has enjoyed much success as Taylor approaches age 80.

The list of awards and honors bestowed on Taylor is amazing. Stemming from his passionate belief in music education, he has built an impressive career.

He has served as Artistic Advisor for Jazz to the John F. Kennedy Center for the Performing Arts in Washington D.C. since 1994. He earned his doctorate at the University of Massachusetts, where he currently is the chair of the music department.

His contributions to the popular appreciation of jazz, along with scholarly and professional programs, have earned him a reputation as the top jazz educator of our time.

Taylor and Ramsey's upcoming performance is an exciting opportunity for Coloradans to see the greats in person. Combined, the two represent an astounding jazz legacy, and they continue to benefit the popular audience to this day.

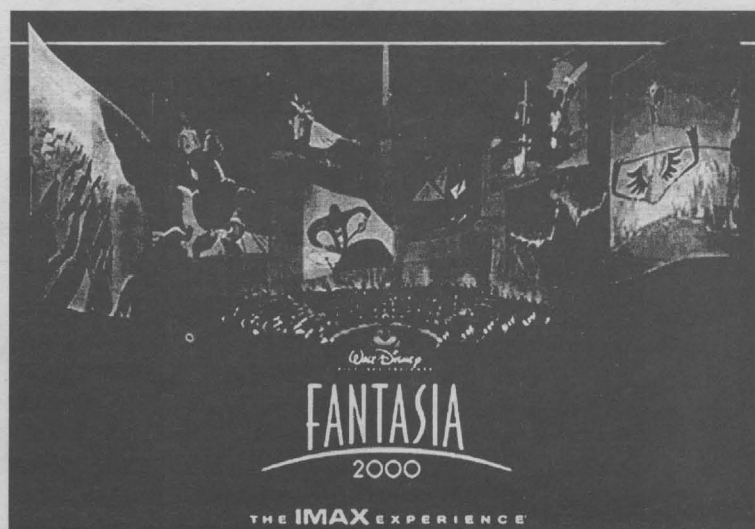
For tickets to the show, call 303-292-5566, or order online at www.coloradosymphony.org.

CSM and the Arts Presents

FANTASIA 2000



CSM and the Arts has purchased discount tickets to two showings of Fantasia 2000 at the Untied Artists Colorado IMAX Theatre on Saturday, February 19. The first showing is at 7:00pm, and the second showing is at 8:45 pm. We are selling these tickets for \$2.00 per student; tickets are available on a first come first serve basis. Please stop by the Office of Student Activities to purchase your tickets. If you have questions regarding this event, please contact Caim A. Lindloff, in the Student Activities Office, or via email at clanders@mines.edu.



What's On This Weekend ...

Happy Valentines Day!!!

Around Town

- Rivers: The Song of Life (Foothills Art Center)
- Komodo Dragons (Denver Zoo)
- Chanticleer (Macky Auditorium: Feb. 14, 8 pm)
- Beethoven's 9th/ Chocolate Feast -- Jefferson Symphony Orchestra (Green Center: Feb 13, 7 pm)

Opening on the Big Screen

- *The Beach* (Leonardo DiCaprio)
- *The Tigger Movie*

At the Denver Performing Arts Complex

- Colorado Symphony: Ramsey Lewis & Billy Taylor -- Jazz Piano (Boettcher Hall)
- Shakespeare's *A Winter's Tale* (Stage Theatre)
- *Waiting to Be Invited* (Space Theatre)
- *Madame Butterfly* (Temple Buell Theatre: OPENS Feb. 12)

What's On Next Weekend ...

FAC

- Comedian Alonzo Bodden (I-Club)

Around Town

- Rivers: The Song of Life (Foothills Art Center)
- Komodo Dragons (Denver Zoo)
- CU Orchestra (Macky Auditorium: Feb. 20, 4 pm, FREE)

Opening on the Big Screen

- *The Whole Nine Yards* (Bruce Willis, Matt Perry, Rosanna Arquette)
- *Boiler Room* (Ben Affleck)
- *Hanging Up* (Meg Ryan, Diane Keaton, Lisa Kudrow, Walter Matthau)

At the Denver Performing Arts Complex

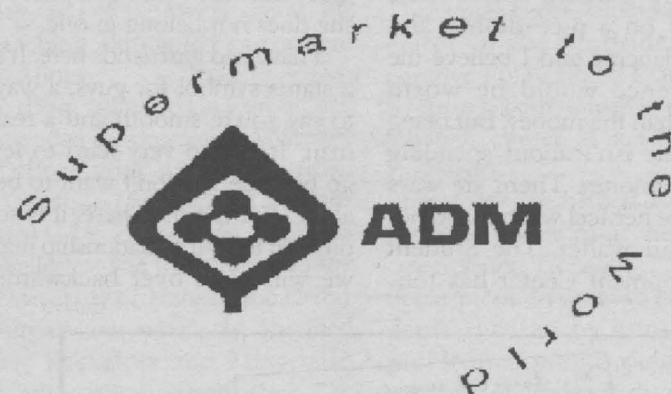
- Colorado Symphony: The Romeros (Boettcher Hall)
- Shakespeare's *A Winter's Tale* (Stage Theatre)
- *Waiting to Be Invited* (Space Theatre: FINAL WEEKEND)
- *Madame Butterfly* (Temple Buell Theatre)

Congratulations Katy Lau

Katy Lau is a graduating senior in chemical engineering. Leaving Colorado School of Mines in February, Katy will begin her new career for Archer Daniels Midland Company. Katy will be working in soybean processing in Decatur, Illinois.

ADM is the world's largest agri-processing company and is based in Decatur, Illinois. ADM is continuing to expand throughout North America as well as in China, Europe and South America.

ADM processes corn, soybeans, and other oil seeds and produces high fructose corn syrup, citric acid, Vitamin C, Vitamin E, TVP, vegetable oil, lecithin, ethanol, as well as many other products.



Katy found out about ADM's career opportunities from career opportunities from career services and scheduled an interview with ADM. She interviewed in Decatur, toured production facilities, and was then hired as a production assistant.

Katy will begin training for a period of six to twelve months. During this time she will work with different technicians and engineers as well as learn about the entire process of production at the plant. She wanted the chance to have hands-on experience. Katy is eagerly awaiting her new career at ADM.

We look forward to Katy joining us.

WELCOME TO ADM

Letter to the Editor

Birth Control Defended

This letter is in response to James Oltmans' editorial run on page 6 of the Jan. 20, 2000 issue of the *Oredigger*. It proposed abstinence as the best method of birth control and suggested all people should abstain from sexual relations before marriage. The article also discussed James' view on the possible consequences of birth control and abortion.

Dear Editor,

I recently read your editorial on male birth control. I felt that the authors of the first two articles presented their opinions in a straight-forward manner. However, I was distressed to note that the author of the third portion of this piece, aside from being blind to the realities that have become a very concrete part of our society, also has made statements

that have no factual basis. In fact, some of his statements are completely untrue.

The first statement that I object to is, "Many women have taken some form of birth con-

trol that has caused emotional instability while using it and has caused infertility later on." The first part of this statement, although partially true, is not completely true. In fact, the Planned Parenthood Fact Book list depression as one of the rarest side effects associated with using birth control pills. There is little to no attitude alteration

associated with other forms of birth control. The second part of the statement is almost completely false. Birth control pills have never been scientifically linked to irreversible infertility. A woman may remain infertile for up to six months after she stops taking the pill, but once her body returns to its normal hormone levels, fertility will be restored. Although permanent infertility has been associated with other forms of birth control in the past, the hormonal methods currently available on the market have no such risk.

The second statement I object to is, "What if it causes breast cancer, or perhaps some other deadly disease?" First, birth control pills and other hormonal methods of birth control actually lower the risk for breast lumps, uterine cancer, ovarian cancer, and ovarian cysts. Additionally, women who take birth control pills have fewer cramps

associated with PMS, less anemia, less instances of pelvic inflammatory disease (PID), and lower rheumatoid arthritis rates. There are some risks associated with birth control pills, such as high blood pressure and liver tumors. However, the doctor that prescribes the pills should be aware of which people are high-risk candidates for these side effects.

My final problem with this editorial is that the author lumps all forms of birth control together into the same group. Every form of birth control is different and has different positive and negative benefits. To talk about them as a single entity shows his lack of research and his unwillingness to look beyond his chosen method of birth control.

Sex happens. To refuse to accept that is a misjudgement of our society. Abstinence will never be a successful form of birth control because some people choose to be sexually active. However, those who choose to be sexually active have the responsibility to use birth control and protect against STDs. I personally applaud any new method that will help these people take this responsibility.

Rosemary Blosser

Letter to the Editor

Valentines Day Dating Advice

I don't feel like a real winner as a single guy attending CSM. I don't like spending Valentine's alone. I would rather be out with a girl on my arm, having a great evening with someone I'm interested in. I would spend some money on a nice dinner and some dancing and I believe the experience would be worth more than the money. But being romantic isn't about spending lots of money. There are ways to make her feel wanted and not kill your wallet. The Student Development Center has tons

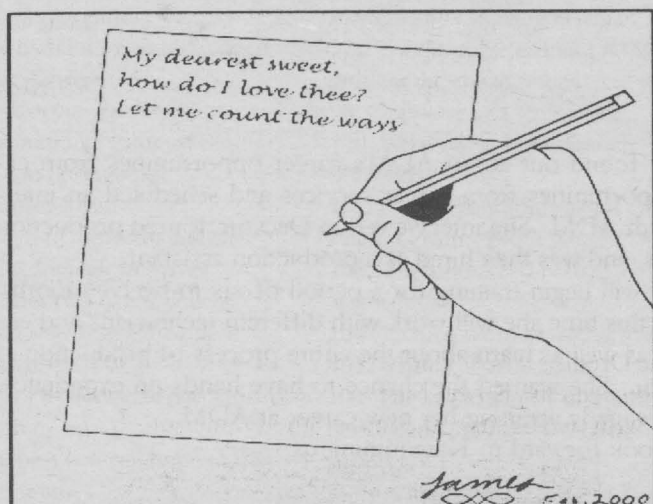
of handouts on inexpensive date ideas. Put a little thought into it. Truly, the evening should be about the two of you, not a bit of crystal set in gold. If she is worried about some object more than the relationship, then she does not belong in one.

I have had girlfriends here. It's a status symbol for guys, a way to say you're smooth and a real man. It is also very hard to let go because we don't want to be alone. For the men here, it is so difficult to start a relationship that we will bend over backwards

to keep it. We have to live with the fact that she can have her choice of men, and we feel we have to prove ourselves daily, for fear of being dumped for the bigger, better deal. The single guys have it even worse. They toil daily at this school, seeing nary a pretty face, only to realize: she's taken. Then their friends come around, talking (read: gloating) about how their last date went. Many of my friends just accept they will not have girlfriends while at CSM!

If you think Valentine's day sends a shiver through men's bones, well, it does. For the majority here it is just another confirmation of their lonely situation, another way they are cut off from those around them. If you are alone this Valentine's and tired of it, do yourself a favor: ask someone out. Instead of waiting for "THE ONE" to come to you. If you're a girl—believe me, he will say yes. Guys, the worst she can say is no. It doesn't have to be serious; it's just to get off campus and to spend one evening having fun. Why allow yourself to be the one left behind?

Dante Allighieri



At this point Jed began to wonder if he should use Calculus or differential equations.

Ansell Addresses ASM Lecture-Dinner

The house was packed. Dr. John Speer had invited my Materials Science class to last Thursday's lecture-dinner, which was sponsored by our campus American Society of Metallurgists (ASM). Not everyone from my class could attend. I'm glad I could. I have questions now sitting on the tip of my tongue just waiting for Dr. Speer to mention the subject in class. Our distinguished speaker was Dr. George Ansell, former Mines president ('84-'97). And he peaked my curiosity.

In his lecture Dr. Ansell addressed his career in metallurgy, the nature of the science, what has occurred during his life's experiences, and why those things occurred. He spoke of how he remembers sleeping in class and vowed that his students would have no such need. With his enthusiasm for "chemistry plus physics which equals metallurgy," one could see how it must have been fun to learn from him. Dr. Ansell, who has done research with high level businesses, the Navy and NASA on jet engine alloys, was able, in a short time, to clearly convey a tremendous base of current information and technology. It was obvious that his audience considered him an asset to the academic, government, and business communities alike.

Dr. Ansell's undergraduate thesis was on the electron micro-

scope. He was instrumental in both the development of the mechanism and in using it to examine dispersion and steady state high temperature creep in metal alloys. Why is ferris martensite strong? Why is there a 1000-fold shift in carbon solubility in iron at high temperatures? You should have been there.

Dr. Ansell spoke of Mines as well. Apparently during his reign, the goal of Mine's administrators was to establish Mines, permanently, as a school that graduates quality, not quantity, engineers and scientists. This necessarily required that the school stay small. Because of this, Mines gets less than a fifth of its funding from tuition and the bulk of the rest from business and government research grants.

By the way, the dinner, which was catered by Aramark, was excellent. I'd say that they outdid themselves, but they didn't. When it comes to catering "function dinners," they've got it down. I've been to several of these dinners and in that arena, they do excel.

The ASM's next lecture will feature the distinguished Dr. Forward whose credits, contributions, and experiences are far too many to list here. For information on this upcoming lecture, contact Dr. Speer at jspeer@mines.edu or 303-273-3897.

Faisal G. Hashem

Letter to the Editor

CSM is more than a "Superior" Education

To the Editor:

I once asked former CSM President George Ansell why he dropped, "World's Foremost School of Mineral Engineering," from the sign on Highway 6, just west of the campus. His reply was, "The School of Mines is much more than that." I asked him, "What more is there than being 'foremost'?" He didn't answer.

As we enter the new century, I'll always remember 1999 as the year in which one of the last, great traditions at the Colorado School of Mines was lost. I was saddened in December to see the school's historic motto changed on the banner of The Oredigger from, "The World's Foremost School of Mineral Engineering," to "The Voice of Colorado School of Mines, a Superior Education in Applied Science and Engineering."

Yes, I know that a change in the motto of the school is being contemplated by the administration, the Alumni Association, and

the trustees; but no official motto has yet been approved. Although many coveted traditions at Mines are gone and the school has changed, there are some traditions that should be left intact to maintain the pride of our alumni and the admiration (and envy!) of other engineering institutions. Ask yourselves, "Are we only superior, or are we the best?" To paraphrase George Ansell, "The School of Mines is much more than 'superior.'" I like to think that we are still the best and are proud enough to say it!

The *Oredigger* was one of the last, great bastions for traditional school pride. Change the motto if you must, but don't change it on the sacrosanct *Oredigger* banner. If the banner changes, how long will it be before your newspaper becomes just another Daily, or Collegian, or Press, or Times, or Bugle?

Dan Wilkowsky, Met. E. '66

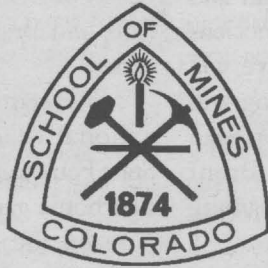
The Debate over Legalized Prostitution

This week our columnists are responding to a recent suggestion made by the United Nations to legalize prostitution by willing adults. Our two columnists debate over not only the morals of the idea, but whether or not it will prove harmful to the people, mostly women, in question. The question remains, though - will legalizing prostitution do anything to lessen the forced prostitution of young women and men? Or will it still occur, but better hidden from or ignored by the authorities, because those owned by the procurers will be afraid to step

forward? Will prostitutes in the business unwillingly be forced to remain as prostitutes because of corrupt authorities or a fear to speak out because of potential abuse from their owners? How, exactly, could this be regulated? Amsterdam and Nevada both have legalized prostitution, but their systems have been in place many years. Who knows what would happen should the UN remove the ban on prostitution from its charter, or the response from the UN charter countries. Then again, maybe it will just mean more interesting bachelor parties. We will see.

The Oredigger

THE VOICE OF COLORADO SCHOOL OF MINES, A SUPERIOR EDUCATION IN APPLIED SCIENCE AND ENGINEERING



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Pro Legalization

We live in a basically free society. Therefore, laws should be in place only when they contribute to the overall good. The job of our government is to create an oasis of security and equality for us to live as we please. A government should not be a hindrance to you; it should expand your horizons rather than constrict them.

We need laws and the justice system to maintain a safe and flourishing society. No one denies the fact that we need laws against things like murder and insider trading. Conversely, a law that outlaws drinking grape juice on Monday serves no good and is a hindrance to our lives. A law concerning prostitution is somewhere in between. What we must decide is whether the law against it contributes to the overall good and does it really matters that some think prostitution is morally wrong.

First let us deal with the problem of morality. Many feel that it is morally wrong to pay for sex. It is perfectly fine to have feelings of right and wrong, but is it okay to force others to live the way that you feel is right? When we have the opportunity to do everything we want we are

satisfied. When we do not we are angry. If you had a closed campus in high school or lived during prohibition, you know what I mean. But when others are denied opportunities, which we don't care for, we could care less. How many of us care that many older people are being forced to retire? We don't care, but when we are older we will. My point here is that just because it doesn't affect you and you don't care for it doesn't mean that it should be illegal.

What is wrong with paying for sex? If an adult wants to have sex and is willing to pay, and another adult is willing to have sex and take the money, where is the problem? Prostitution doesn't have to be a quickie in some sedan in a dark alley. The prostitutes don't have to be homeless, strung out on drugs, giving all of their income to pimps.

Prostitution is legal in Nevada and there aren't any problems with it there. If two consenting adults choose to engage in something that affects no one else then there is no problem with that. Legalized prostitution in Nevada does no harm.

What is the difference be-

tween paying money for a massage and prostitution? In that situation you are paying for physical pleasure. All relationships are give and take and what is given and taken is usually not clear-cut. In the case of prostitution, it is clear that money is given for sexual pleasures. What is the difference between prostitution and sexual relationships where people are in it to get something out of it besides money? Should sexual relationships be outlawed if you are in them for reasons other than love?

Why can't we allow consenting adults to do what they want as long as it doesn't hurt our society? Legalizing prostitution doesn't mean that there will be a hooker on every corner. The government would regulate it. These are not going to be STD distribution centers. It is all safe sex. There would be far fewer drug users hooking their bodies on the streets. The legal prostitutes would all have to undergo regular drug and STD tests. Additionally, it would be a detriment to the many pimps who make a killing by oppressing women.

Scott Daniels

Con Legalization

The United Nations is currently considering the legalization of voluntary prostitution. What may be called a bold move to do away with our prudish past is actually a regressive step. What is construed as an added freedom for women is actually just another way to enslave them.

The prostitute's body is sold to the buyer for a specified amount of time and during that time, just about anything the buyer wants goes. I find it humorous that under the banner of women's rights and freedom men seem to be the only ones benefiting. Men are always seeking instant gratification, so what do we do? We tell women that in order to express their freedom they should express their sexuality. We, the men, were the ones who really benefited from the free love movement. We weren't stuck with the child or the guilt of the abortion. No, we just whispered in women's ears that being modest was oppressive. We told them that they should get out there in the work-a-day world so they could be self sufficient when we just wanted to make sure they wouldn't ask for a dime from us to support the kids. We put our burdens on them and turned them into our love machines; as if love had anything to do with our lust.

So now, here we are once again on the brink of "freeing" women to satisfy ourselves. I am saddened by what we, the men of this society, and age have done. I am even more saddened that women haven't wised up to

what's going on. It seems we men can call just about anything a way to express your freedom and they'll run off and do it.

Unfortunately, my heart just won't stop telling me, "there's something wrong here." You may shrug it off as another oppressive chain placed by society; yet the guilt and the pain remain. What will you do? Will you continue to let men have their way with you? Or will you say enough? End the "sexual revolution," start a moral civil war and proclaim emancipation from the bondage men have placed on you.

You may be asking yourself, "What on earth does he mean by that?" I merely propose that you no longer give your bodies for stupid one-liners in the bars, or for money in the form of prostitution. Don't give yourselves to us because we ask you to prove your love for us. I suggest you wait until we've made a real commitment and followed through with it. The commitment I speak of is marriage. You want safe sex? It's found in a loving committed marriage. You want security? It's in marriage. You want to wake up and look over to find your man still there in the morning? Try marriage. Don't settle for anything less.

I wish you good luck in your struggle. Remember to question motives behind your so-called freedoms and don't blindly accept what others tell you and you will succeed.

James Oltmans



Mule violated by unidentified snowmen.

Have a better caption for this photo? Email your suggestion to The Oredigger (oredig@mines.edu) and we'll print the best suggestions in our February 24th issue.

GET YOUR OPINIONS,
NEWS, SCHEDULE, ATTITUDE,
COMICS, LOVE LETTERS,
DEATH THREATS **PRINTED!**

The Oredigger will gladly (and legally) print almost anything you send in. So get busy on those keyboards (hopefully with two hands), and mail your submissions to:

oredig@mines.edu

Laccross Ready to Win

The 2000 Mines Lacrosse Team is poised for another great season as it enters play in the Rocky Mountain Intercollegiate Lacrosse League. Last year the team finished the 1999 season with a promising 9-8 record, and earned the number one seed in the Division II RMILL Tournament.

Over the off-season, Mines lost former head coach John Westfall to the University of South Carolina lacrosse head-coaching position, but is now under new head coach David Bonfoey. Bonfoey is a former 1st Team All-State Defensemen from Colorado and played for the Mines lacrosse team from 1996-1999. Bonfoey brings to the team a superior knowledge of the game and will also work on rebuilding the defensive unit that was depleted after the recent graduation of key players.

"I hope to improve on the 1999 season by finishing on top of the division II pile in the RMILL and moving onto division I play in the 2001 season," stated coach Bonfoey.

Returning team captain, senior Sam Tellen, and junior team captain Jeff Chan will lead the Mines lacrosse team on the field and are supported by a strong nucleus of players. The offensive will continue to remain strong and high scoring with junior Sean Donlin, sophomore Brent "Goose" Lutz, and incoming freshmen Alex Podolak.

Junior Tom McGee and sophomore Donny Fecko will head the defense this season. Former mid-fielder, junior Scott Peonio will also see some playing time at defense this season where he will bring his hard-hitting style of play to the field.

"The team this year looks

stronger than ever! The division II title is ours to lose," stated Captain Tellen.

The Mines lacrosse team has a full schedule of games this year against the likes of University of Colorado, Colorado State, University of Northern Colorado, Regis University, Ft. Lewis, University of Utah, Utah State, Boise State, and Brigham Young University.

Mines starts its season against national champion Colorado State Feb 26 at CSU. The team's first home game is March 4 at 2 p.m. on the IM Field against University of Utah. Mines will be seeking revenge for last year's loss to University of Utah in the finals of the RMILL Division II Tournament.

Visit the Mines lacrosse team website at www.mines.edu/Stu_life/organ/lax/ for more information.

Technology Trends in Oil

From page 5

Formation Evaluation: historically "one of the biggest revenue generating sectors within the oil services industry. Wireline logging is the mainstay of formation evaluation. These services are used to obtain geological information by lowering sophisticated measuring devices down a well bore. The most fundamental data obtained by logging operations are precisely measured depths, which can confirm seismic measurements, and identification of formations penetrated by the borehole. During drilling, information on rock and fluid properties, the location, and thickness of potentially productive zones is obtained. During production, logs are taken after the casing has been run down the borehole. Data on bottomhole reservoir helps the engineer determine well conditions, including the size of the reservoir and the likely productive rates." Schlumberger, the leader in logging services, has approximately 65% of the market share. Western Atlas' wireline division and Halliburton Energy Services' wireline unit comprise about 15%. And all three have recently made large technological advances in advanced down-well acoustic, electric, and nuclear tools which use powerful transmitters and sensitive receivers. All use "mobile computers to aid interpretations."

Specialized Drilling Systems: "The ability to accurately chart a borehole's progress as it is being drilled has transformed the way wells are being drilled today, as

access to measurement-while-drilling (MWD) technology gives the driller real-time information as to the location and direction of the drill bit." When drilling conventional wells, the drill bit rotates due to its attachment to the rotating drill string. Drilling mud, forced down the drill pipe and out the bit ports, picks up rock cuttings and carries them to the surface. In directional and horizontal drilling, inside the curved holes, such a technique would lead to pipe fatigue and failure. For these applications drilling mud is pumped through a non-rotating drill string, which actually rotates the drill bit by its hydraulic force. These systems, called mud motors, are now being used with "formation evaluation devices" to give drillers control over "how" they drill wells. MWD technology is best showcased by use of real-time interactive geosteering techniques in highly deviated and horizontal wells, as opposed to directionally steering a well to a predetermined, and maybe erroneous, geometric location.

One of the most current, and certainly a most profound, advances in oil technology is Coiled Tubing, even though "the use of coiled tubing (CT) to enhance oil and gas production started more than two decades ago." CT is a continuous, sometimes longer than 20,000 foot, hollow, flexible, steel pipe string. First it is coiled and mounted onto a truck spool, then unspooled and straightened out as it is fed down into the well. "Once in the hole, CT is rigid enough to perform

mechanical operations in all kinds of wells."

Increased CT usage is due to advances in fatigue protection and the development of larger diameter strings. "CT is manufactured from strips of low-alloy steel which are precision cut, rolled, and steam welded in sizes up to 3.5 inches in diameter. Improvements in metallurgy and manufacturing processes have led to improvements in material strength and reliability. CT applications span a wide range of operator requirements today, and can be classified into four categories - Hydraulic, electric, mechanical, and completion applications." CTD (CT drilling) equipment is smaller than its predecessor, allowing for drilling in smaller locations and lower mobilization costs. "Eliminating Joints from the drill string decreases trip time, improves safety, improves borehole stability, and permits more equipment automation."

These and other oil development technologies were just being put to work when the late 1990s oil market crash reared its head. But as I eluded too in earlier articles, now the U.S. can find oil in more remote areas. Today we are back up and running again. The oil reserves are plentiful and finding more is not a deep concern (pun on ocean drilling intended).

Our dependence on oil as a worldwide feedstock is shifting to a dependence on technology. The oil is there. Now we need the engineers (Mines graduates will do) to retrieve it.

Oredigger of the Week



Marissa Eichhorn
Women's Basketball, #31
5'9", Sophomore
Broomfield, CO
Broomfield High School

This past week, the Lady Orediggers improved to 9-11 overall and 6-7 in the RMAC with a 67-57 non-conference win at Colorado College on February 1st and a 73-54 win over Fort Lewis in Golden on Saturday, February 5th.

In the two wins, Eichhorn averaged 16.5 points and 9.0 rebounds per game. While averaging 29 1/2 minutes a game, Eichhorn also shot .481 (13-of-27) from the field. Even more, the sophomore from Broomfield collected five assists and five steals over the two-game span.

In the latest RMAC Women's Basketball Release, Eichhorn is ranked 11th in the conference in total rebounds (6.6 per game) and third in offensive rebounds per game with 2.80

Mines 2000 Baseball Preview

Mines kicks off its 2000 baseball campaign this Saturday at the Digger Dome hosting Midland College (Neb.) in a doubleheader starting at 12:00 p.m. Despite a breakout year in 1999, the Orediggers are predicted to finish dead last (eight teams) in 2000 in the preseason RMAC coaches poll.

Last season the team finished 28-25 in the regular season, including 14-12 in RMAC play, and participated in the RMAC Baseball Tournament at Mesa State. Despite going 0-2 in the tournament, the team finished above .500 for the first time since 1983 and Head Coach Mike Mulvaney was named RMAC Coach of the Year.

Leading the way in 2000 will be Galin Nelson, Terry Packer and Fernando Saenz, all of whom were named honorable mention all-conference in 1999.

Nelson, a senior right-handed pitcher, had a record of 6-5 while striking out 64 opponents. His 4.07 ERA was among the conference leaders, as well. Packer, a sophomore centerfielder from Omaha, Neb., posted a batting average of .306 with three homeruns and drove in 22 runs. Saenz, a senior shortstop out of Arapahoe H.S., batted .329 with 32 RBIs last year.

Other key returners are Taylor Goertz (senior INF; .254, 15 RBI), David Naibauer (senior catcher/RHP; .248, 14 RBI) and Ryan Kamada (junior OF; 13 BB, 6-of-9 stolen bases). The Orediggers will also play Midland in one nine-inning game on Sunday, the 13th, with the first pitch scheduled for 11:00 a.m.

Dates to Know...

<u>Cycling Time Trials</u>	Feb. 16
<u>Inner Tube Water Polo</u>	Mar. 2
<u>Softball</u>	Mar. 3
<u>Roller Hockey</u>	Mar. 9
<u>Swim Meet</u>	Apr. 3, 4
<u>Powerlifting Meet</u>	Apr. 5

CSM Intramural Sports Update

WOMEN'S BASKETBALL

The women's team capped a perfect 2-0 week with a 73-54 pummeling of Fort Lewis College last Saturday night in Volk Gym. Last Tuesday, CSM earned a 67-57 non-conference victory over Colorado College in Colorado Springs.

At Colorado College, the Lady Orediggers (9-11 overall, 6-7 RMAC) trailed 33-39 going into halftime but rebounded to outscore the Tigers by 16 in the second half and earn the win. Marissa Eichhorn led the team with 17 points and nine rebounds. Amy Bollinger (eight assists on the weekend), Kim Good and Jen Schmidt all scored in double-figures, as well.

In Saturday's blowout win over the Skyhawks, Eichhorn, Amy Bollinger, Good and Schmidt all scored in double-figures again. Eichhorn, a sophomore out of Broomfield H.S., led all scorers with 16 points and once again grabbed nine boards. Over the two-game span, Eichhorn averaged 16.5 ppg and 9.0 rpg while playing 30 minutes per contest. She shot .481 for the week and dished out five assists, as well.

In the February 7th RMAC Women's Basketball Release, Amy Bollinger is ranked second in the conference in steals with

3.15 per contest and fourth in assists with 4.35 a game. Dillard is currently ranked seventh in rebounding with 7.3 rpg and Good second in shots blocked with 1.95 (39 in 20 games) per game.

The women will travel to Fort Hays State and Nebraska-Kearney this weekend before returning to Golden for the final homestand of the season on February 18th and 19th. Saturday the 19th will be senior night as the Lady Orediggers will watch Mindi Harman, Amy McClenathan, Amy Bollinger, Dillard and Nikki Bautista play their final home game at Mines.

INDOOR TRACK & FIELD - The men's and women's indoor track & field teams hosted the Second Annual Joe Davies Indoor Track & Field Invitational this past weekend and finished third in team scoring (men's and women's combined) with 143.5 points.

The men's 1,600 meter relay team of Derek Swanson, Ben Lengerich, Jim Beideman and Eamonn Gardner took first place in the finals with a time of 3:24.57. Swanson also finished second in both the 400 and 200 meter dash. Tyson Parrott tied for third in the high jump with a leap of 6'7", his personal best this season.

Scott Hodgson took second in the pole vault with a mark of 14'0" while Lengerich and Brandon Deth finished second and third, respectively, in the 500 meter dash.

Katie Roche placed third in the women's 500 meter dash with a time of 1:21.26 and high jumper Judy Toel tied for fourth place with a mark of 4' 11-3/4".

Charity Garrison finished fifth in both the long jump (16' 6-3/4") and the triple jump (33' 3 1/2"), as well.

Coming up this weekend, the track & field teams will be at the University of Nebraska-Kearney's Charlie Foster Open.

SWIMMING & DIVING - The men's and women's swimming & diving teams will be competing in the Pacific Collegiate Swimming Conference Championships from Wednesday, February 9th through Saturday, the 12th in Long Beach, California.

Leading the way for the men will be Brooks Masterson, a freshman from Greeley, Colorado. Masterson will compete in the 500 freestyle, the 200 freestyle, the 1,650 freestyle and the 200 butterfly while at the PCSC Championships.

The women will be paced by junior Holly Daugherty. The

Littleton native will swim the 200 IM, the 50 freestyle, the 400 IM, the 200 freestyle and the 100 freestyle.

MEN'S BASKETBALL - After beating the Colorado College Tigers 67-57 last Tuesday in Colorado Springs, the team endured what could arguably be called its toughest loss of the 1999-2000 season on Saturday. Mines lost a nail-biting 72-74 decision to the Fort Lewis College Skyhawks last Saturday in Volk Gym, dropping the club to 10-10 overall and 6-7 RMAC. Despite the loss, Mines still remains in contention for a post-season berth to the RMAC Tournament. In Tuesday's win over CC, five Orediggers scored in double-figures, led by Kez Kennedy, who lit up the scoreboard for a game-high 16 points.

On Saturday, Mines trailed 34-30 going into halftime but fought back to tie Fort Lewis at 68-68 with 1:13 remaining when Ben Esplin nailed three of his game-high 21 points. The tie was only momentary, however, as Fort Lewis' made a lay-up at the :53 mark to go ahead for good. Mines' Mike McNish blocked five shots and recorded a double-double with 12 points and 11 rebounds.

The Diggers will travel to Fort

Hays and UNK this weekend before returning home for the final homestand of the season on February 18th and 19th. Senior night on Saturday the 19th will mark Justin Thurman and David Estabrook's final home game.

WRESTLING - The grapplers currently sit 1-12-1 overall and 0-5-0 RMAC in their 1999-2000 duals after going 0-3-0 on the last road trip.

On Friday night, January 28th, the team squared off against Fort Hays State University in Hays, Kansas and suffered a 15-30 loss. On Saturday, the team wrestled both Nebraska-Kearney and Nebraska-Omaha. In the Kearney dual, the Orediggers were down early but made it respectable dual with some late victories by Luke Howard, Mark Dubrovich and Mike Roberts. However, it was too little too late as the Diggers fell 16-32.

Later that day, Head Coach Dan Lewis' team wrestled #1 (NCAA II) Nebraska-Omaha and performed courageously but endured a 12-33 setback. Nate Mascarenas, Howard and Dubrovich all posted wins in the loss to the top-ranked Mavericks.

Next up for the wrestlers will be a dual at Chadron State on February 12th.

Softball Starting

The Mines softball team will officially begin its 2000 season on Saturday, February 19 when the Lady Orediggers host Oklahoma Panhandle State.

The Lady Orediggers come off of a 12-31 season (6-18 RMAC) and lose just three players from the 1999 squad. Also, Mines has 8-of-9 starters returning and

of those eight, three were All-RMAC selections. Reece Bollinger (SS) and Kristen Kraynak(C) were honorable mention and Darcy Wardle (Util.) was first team.

Returning starters include Kerry Petranek, Amanda Kelly,

Angela Holm, Kari Gonzales and Rachel Wilde. The 2000 pitching staff returns Carrie Wittkopf, Katie deBesche and Angela Wetz. Freshmen Karrie Rein (OF) and Stacey Martinez (3B) could contribute this season, as well.

Wardle led the team in hitting with a .380 average, while Kraynak led CSM in RBI's last season with 16. Wittkopf, who will be a mainstay in the starting rotation, posted the team's lowest ERA in 1999 at 5.80. The Lady Orediggers open up at home on February 26 against Fort Hays State. Games are scheduled for 1:00 and 3:00 p.m.

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APO

APO meets in Meyer Hall 357 on Wednesday at 7 PM. For more information, contact Ian Nickerson at inickers@mines.edu.

Bridge Club

The bridge club meets on THURSDAYS from 6-11 PM in the Coolbaugh atrium. Feel free to come for any portion of this time. Beginners are welcome. If you have any questions, please contact Jeff Brown (303-279-1410, jsbrown0@mines.edu) or Dan Stacy (720-371-1292, dstacy@mines.edu).

Board of Publications

If you have complaints regarding any of the three student publications at the Colorado School of Mines, please feel free to contact a member of the board of publications. You can email the chair at clanders@mines.edu or the ASCSM representative at wtrainor@mines.edu or call (303) 273-3784 and leave a message for Whitney Trainor.

Campus Crusade for Christ

All are welcome to join us, for our weekly 737 meeting. It is a place to hang out with friends and talk about life. The meeting is held every Thursday at 7:07 PM and is located at First Baptist Church of Golden on the corner of 19th and Washington. Afterwards, we will be going to the Golden Grind for food and fellowship.

Catholic Newman Group

Anyone is welcome! A discussion group for contemporary issues. Every Tuesday night at 8:30 PM; 2nd floor of the Green Center in the Ted Adams Room. Contact Matt at 303-271-0654 or mlengeri@mines.edu for more information.

Circle K

Come find out about the world's largest student run service organization. Meetings are held Tuesdays, 6 PM at the Student Center in room 236. For more information contact clapok@mines.edu.

CSM Concert Choir

The CSM Choir is open to everyone!! Come sing jazz, classical, and contemporary pieces with us every Thursday from 4-6 PM in CO 209. Questions call Matt at 303-271-0654 or email mlengeri@mines.edu.

E-Days

E-Days 2000 is coming. As your organization begins to plan its new year, start planning to help with

Miner Notes

E-Days 2000!!! Meetings will be held on the following dates to help organizations figure out how and what they can do! March 7, March 28, and April 4. Questions? Contact Jessica Jordet 303-273-3908 or jjordet@mines.edu

Earthworks

Meetings are held every Wednesday at 12 noon in Alderson Hall 362. All are welcome! Come help us with plans for a campus Earth Day celebration.

FCA

The Fellowship of Christian Athletes meets Wednesdays at 7:30 PM in the Projection Room on the second floor of Volk Gymnasium. All are welcome: Christians, athletes, both or neither. For more information email fbuckner@mines.edu.

FCC

Fellowship of Christian Cowboys (and girls), the 1996-97 New Club of the Year, meets weekly on Thursday at 6 PM. For information, email derjacks@mines.edu or visit the website. http://www.mines.edu/Stu_life/organ/fcc.

GLBE

Gay, Lesbian, Bisexual Engineers meetings held twice monthly with social events throughout the month. For more information contact glbe@mines.edu or visit our website at www.mines.edu/Stu_life/organ/glbe

Graduation

March 30 & 31, each day from 10:30 AM-2:30 PM Graduation Salute, Student Center Ballrooms A & B. April 26, 4 PM graduation practice, Bunker Auditorium. April 28, check out forms due to the Dean of Students Office. May 4, 6 PM Senior Banquet in Friedhoff Hall. May 5, 9 AM graduation, Kafadar Commons.

Karate Club

CSM Karate Club has a new

schedule! Monday and Wednesday from 6:30-8 PM in the Student Center Ballrooms. Karate is a tremendous way to stay in great physical shape, tune mental concentration skills and gain confidence about personal security. Spectators and new students are welcome anytime. For more information call Amir at 303-216-2183 or email achaghaj@mines.edu.

Kayak Club

Kayak Club holds pool sessions every Monday from 7:30-9:30 PM. Everyone is welcome from beginners to advanced. Contact Jason at (303) 273-0507 or email jlegore@mines.edu.

Kendo Club

The CSM Kendo Club will meet Wednesday evenings, 7-9 PM, in the Student Center ballrooms. Kendo is the ancient art of Japanese fencing that evolved from the life and practice of the Samurai warrior. New students and spectators are welcome anytime. For more information call Sensei King at 303-795-9040 or email fourrex@aol.com.

LDSSA

All students are invited to enjoy lunch for \$1 and a guest speaker at the Latter Day Saint Student Association's Friday Forum. Every Friday at noon at 1212 Arapahoe Street. Email meallen@grussell for more information.

Outdoor Recreation Center

There is still space available for the **Avalanche Awareness** course to be held on Friday evening, Feb. 25th and Saturday, Feb. 26th. Cost is \$35 for students, \$45 for non-students. Call the ORC at 303.278.6202 for more information.

Rugby

"GIVE BLOOD - PLAY RUGBY." No experience required -

will train. Violent temperament and aggressive nature a plus. If you are interested in joining a winning team and meeting all kinds of crazy-ass people, e-mail tfoutz@mines.edu or call TY at 303-205-1155.

SCA

Fighter Practice: Tuesdays 7-9 PM in the Field House. Questions? Contact David at (303) 215-6243 or dclement@mines.edu.

Sober Drivers

Need a ride home on Friday or Saturday night between 9 PM and 3 AM? Call Kappa Sigma Sober Driver Program at (303) 279-9951. You must be within 15 minutes of campus.

Society of Women Engineers

The next SWE meeting is on Wednesday at noon in Coolbaugh 209. For more info, email aama@mines.edu

Ultimate Frisbee Organization

Practices on Kafadar Commons every Tuesday and Wednesday at 4-5:30 PM. All are welcome to come practice with us for competitive play against other schools. Also, official UFO CSM frisbees are available for \$8. For more information contact Steve at (303) 271-9972 or sgrigel@mines.edu.

Val-O-Grams

Val-O-Grams will be for sale in the Student Center Feb. 7-11 from 11 AM until 1 PM. A heart shaped balloon, a card and Pez candy dispenser will be delivered on campus. One for \$3 or 2 for \$5.

Waterpolo

If you don't need water wings to stay afloat in the pool, come join us for practice on Tuesdays and Thursdays from 7:45 to 9:45 PM and Saturdays from 4 to 6 PM. Waterpolo is great exercise and swim suit season is right around the corner- what better way to get ready for Spring Break? And guys, where else will you be able to see women in bathing suits in February in Colorado? See you at Volks Gymnasium.

Women's Ultimate Frisbee Team

Want to have fun, make friends, and get in shape? Come be a part of Mines first ever Women's Ultimate Frisbee Team. No experience is required. Practice is on Kafadar Commons from 4-6 PM Fridays and 2-5:30 PM Sundays. For more information call Julie West at 303-278-7431.

CLASSIFIED ADS

Bartending JOBS are in Demand. The fun jobs. Earn \$15-30/hr. Job placement assistance. Call Now!!! \$199 Back-to-School Special ends soon. Call 303-758-5000 or 1-800-BARTEND

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For Sale. Specialized mtn bike \$125, Epson inkjet printer \$50, dinette table w/ 4 chairs \$50, Pioneer laser disk player \$25, CD rack \$5, 303-384-3995

Help Wanted. The CSM Phonathon has openings for callers. Great Pay, Flexible Hours. For more information, call Mary Ann at 303-273-3141.

Help Wanted. Part time student help in Office of Institutional Advancement. Work 8-10 hours per week, Monday-Friday, between 8 AM-5 PM. For more information, call 303-273-3141.

Roommate Wanted. Older home in downtown Golden. No smokers or drinkers. Big fenced yard and satellite dish. \$500 includes utilities. Call 303-279-0888 and leave message.

Help Wanted. Mother's helper wanted. Very flexible part time. \$7.00/hr and must drive. Very close to campus. For details call Anne at 303 278-1639, or cell 303 517-6726.

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Please submit all classified adds the Friday before publication. Multiple week notices are available. Space is on a first-come first-served basis.

Placing a Miner Note

The easiest way for the student body to see your upcoming meeting or event is to place a Miner Note. Please submit all Miner Notes by email or hard copy the Friday before publication. There is no charge for the service.

Answers to Mines Crossword

